Casting the Spotlight on Human Exploitation: The Light and Dark Sides of Big Data

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Big data, broadly understood as high volume, velocity and variety information assests that demand cost-effective and innovative forms of decision making[1], is increasing shaping interactions between market, civil and state sectors. Against this backdrop, I expore the opportunities and risks of big data for social partnerships.

Last year I joined the Andrew Crane and Dirk Matten author team on *Business Ethics: Managing Corporate Citizenship and Sustainability in the Age of Globalization*[2], along with Laura Spence at Royal Holloway University of London. We are now halfway through updating the fifth edition of the textbook, bringing in new cases, contexts and conceptualisations.

It's been an enjoyable but steep learning curve; taking on a seminal text but adding in our own voices. It has also been a process that has encouraged me to reflect on my own interest in business ethics in the digital sphere, particularly how 'big data', or advanced 'data analytics'[3], might help or hinder society's pressing issues, including human exploitation and disempowerment. I see this as the 'light' and 'dark' sides of big data.

Social partnerships have been a key focus of the book since its first edition in 2004 and as I work through the text, I have been considering how big data may facilitate new kinds of collaborations between government, business and civil society organisations (CSOs) for societal good (Figure 1). This is the 'light' side of big data. To unpack the benefits of multi-sector partnerships, I draw on the work of the Data-Pop Alliance, a global coalition that promotes a 'people-centred' approach to the big data 'revolution' and provides a useful four-part framework to understand big data for social good[4].

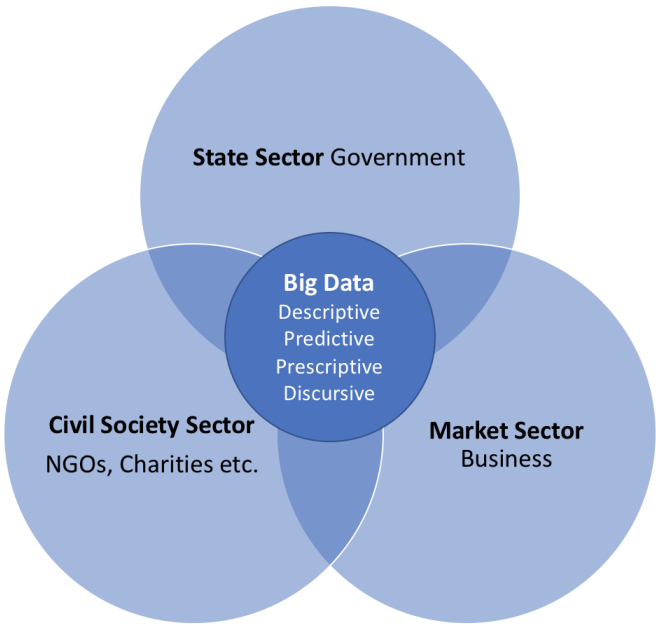

Figure 1: The light side of big data: Facilitating partnerships across market, civil and state sectors (adapted from Crane and Matten, 2016, p. 440).

First, the *descriptive* function of big data involves early detection of humanitarian issues. A recent partnership under the 'Operation Red Alert' campaign has seen an Indian CSO, *My Choices Foundation*, and technology companies, come together to tackle human trafficking. Using advanced analytics applications, Indian census and additional socio-demographic data, villages in rural India that are most at risk of trafficking have been

identified and preventive measures have been put in place. Here I see partnerships providing access to new information and empowering at-risk communities.

Second, the *predictive* function of big data permits 'now-casting'; making real-time inferences related to key social isssues. The Global Slavery Index, for instance, provides an interactive map of the prevalence of modern slavery in different country contexts. Utilising data gathered across 167 countries, this visual aid helps to measure the global scale of slavery, forced labour and human trafficking. And with a large proportion of refugees being forced into slavery, the World Food Programme (WFP) and the United Nations High Commissioner for Refugees (UNHCR) have used such data to develop innovative ways to manage aid payments in collaboration with technological and financial companies. Today, in Jordan's Zaatari refugee camp, nearly 80,000 Syrian refugees are able to purchase food via eye scans instead of traditional cash or card payments. Here 'big' data inferences are translated into 'small' data support through biometric data and blockchain technology, benefitting vulnerable populations.

Third, the *prescriptive* (or diagnostic) function of big data goes beyond description to make recommendations on the basis of causal relations. As part of the US Climate Data Initiative, launched in 2014, a 'Social Vulnerability Index' tool was initiated to identify communities that may need support during change related natural disasters. Using U.S. census data, citizens were mapped in relation to factors including poverty, access to transportation and housing conditions and their subsequent risk levels in relation to extreme heat, precipitation and water-borne illness exposure. Promoting stronger data analysis and climate resilience, this initiative shows how preventive partnerships can avoid human suffering, economic loss, and potential avenues for exploitation.

Finally, the *discursive* function of big data sees dialogue within and between key stakeholder groups identifying needs of vulnerable populations. GSMA's Big Data for Social Good initiative recognises that in disaster-prone zones, mobile operators can capture anonymised and aggregated mobile indicators, such as location, and enable relief agencies to direct resources efficiently during humanitarian crises. GSMA has developed a task force of mobile phone operators across 100 countries and an advisory panel from UN agencies and CSOs to leverage mobile operators' big data capabilities in addressing epidemics and humanitarian crises. This initiative is a living breathing example of Sustainable Development Goal (SDG) 17 (Partnership) in action, providing a clear societal vision for big data that realises the true potential of dialogue.

From these examples, it is clear that big data has the capacity to *empower, innovate, inform and advocate* for societal good across market, civil and state sectors. But what happens when our collaborators become adversaries, experiencing ethical conflict between their visions for big data? Indeed, despite such huge strides being made in the role of big data in society, scholarship is calling for new ways of thinking about governance in a digital age[5]. As mindful business and society scholars, what is the true cost of atomising individuals, communities and whole regions into data points? I see this as the 'dark' side of digital data and herein I see two counter-arguments to the ideas of big data for social good (Figure 2).

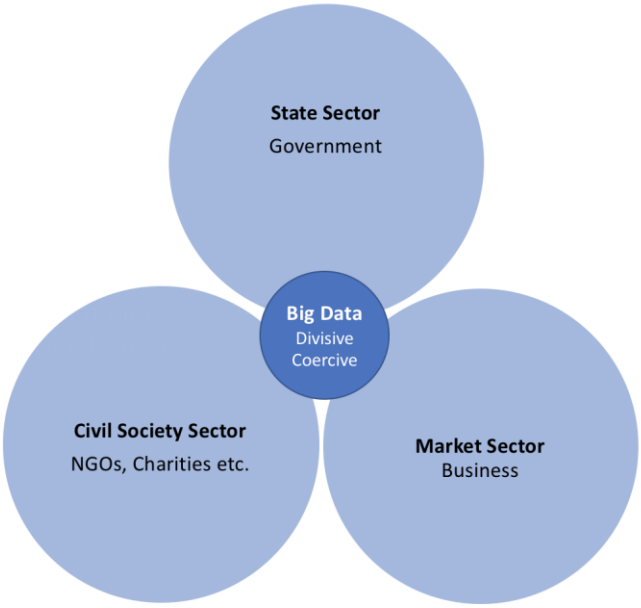

Figure 2: The dark side of big data: Destabilising partnerships across market, civil and state sectors (adapted from Crane and Matten, 2016, p. 440).

First, it has been argued that 'big data is mistakenly framed as morally neutral'[6] given an inclination to consider strategic and operational uses of data, as opposed to ethical appropriateness. As our reliance on data grows, and multi-sector collaborations continue, to what extent should we as citizens understand how data is shaping our daily lives? Let's think about the ethics of 'invisible' algorithms here. While machine assisted learning can offer greater efficiency in understanding the potential impact of natural disasters on human health, such algorithms may also discriminate against marginalised populations[7]. Debate continues on the benefit of facial recognition technology, for instance, which is increasingly being used by police forces to profile criminals. Studies have proven that the tools are less reliable at profiling women and black people, leading to innocent people being placed at risk[8]. Such developments, or 'imperfect biometrics', may further entrench systemic inequalities, perhaps even exasperating extreme forms of human exploitation. Is big data *divisive*?

Second, the recent Cambridge Analytica furore has heightened public scepticism around the role of technology corporations in society, particularly in democratic processes. This case stretches our understanding of corporate citizenship, to reveal the politicisation of corporate players as powerful entities who determine what data is 'public' (open and accessible) and 'private' (intimate and secure). Here the commercial remit of much big data activity seeks to unbalance the power relations depicted in Figure 1. Indeed, within the multi-sector partnerships outlined above, where does accountability for collection, analysis, dissemination and storage of big data lie? The new General Data Protection Regulation (GDPR)[9] which came into force in May across Europe aims to place control for data use back in the hands of citizens and governments. Yet as the commercialisation of attractive big data sets continues, we must ask: is big data *coercive*?

The only way to overcome the 'tyranny' of big data is to prioritise human-centred analytical approaches that advocate for user-centric data ownership and management, algorithmic transparency and 'live' experimentation with data-driven policies[10]. As scholars, I encourage us all to interrogate the assumptions underlying the big data sets that we use, and to be more mindful of the darker sides of these attractive information sources in theorisation at the business and society interface. Practitioners and policy-makers have a role to play too. In pushing for greater ethical reflexivity in big data management, what would be the equivalent of an ethics review in an industry context? Only through more critical reflection might we begin to balance the the light and dark of sides of big data in social partnerships across market, civil and state sectors.

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